"they were all head downwards from 4 p.m until darkness. These groups I stayed to watch, and in every case they reversed their position to head upwards at dark. In fact, they hardly waited for it to get quite dark." This habit he has often

previously noticed.

I recently turned down some *icarus* on large plants of flowering grasses, upon which they rested each evening in the usual way, head downwards, and remained so until darkness set in, when they turned round and rested head upwards, which position they retained for the night. No doubt other species of "blues" act in a similar way.

It is considered that these butterflies rest for the night head downwards so as to defeat the attacks of birds which would be unlikely to inflict an injury on the vulnerable thorax, and would only grasp the wings if they attempted to seize a resting butterfly, and when darkness has compelled the birds to sleep, the

butterfly can safely resume a normal resting attitude.

Possibly this may be so, but such is mere conjecture, and it is most unsatisfactory to theorize on natural phenomena. When butterflies have taken up their resting attitudes, it seems somewhat improbable that they are attacked by birds to any appreciable extent, or very seldom. I cannot remember having seen an instance of such, but have occasionally seen birds pursue butterflies on the wing, but directly the latter settled with closed wings the birds were eluded and gave up the chase.

# AUSTRALIAN BEES OF THE GENUS EURYGLOSSA.

### By T. D. A. COCKERELL.

#### Euryglossa calliopsiformis, Cockerell.

3. Differs from description of female as follows: clypeus all yellow except a minute spot on each side; supraclypeal mark large, broadly triangular, with a spear-head shaped prolongation from its apex; lateral face-marks pointed at end; yellow band on posterior orbits rather narrow, its upper end diverging from the orbit; antennæ long, scape yellow in front; pleura with additional yellow markings; abdominal bands yellow.

Hab. Mackay, Queensland, at flowers of Leptospermum, October, 1898 (Turner). British Museum. This male is easily known from that of E. calliopsella by the colour of the scutellum.

### Euryglossa altitudinis, sp. n.

3. Length 4 mm.; black, with the clypeus (but no supraclypeal or lateral marks), labrum, mandibles (except red apices), scape in front, and tubercles, all light yellow; flagellum long, light ferruginous beneath; head broad; face with long white hair; front dull; meso-

thorax very feebly shining, rather coarsely microscopically tessellate; tegulæ fuscous; wings hyaline, slightly reddish, stigma and nervures rather pale dull reddish; first r.n. entering basal corner of second s.m.; legs yellow, with the anterior femora and tibiæ mainly black behind, the middle femora and tibiæ also dark behind and their tarsi brown, the hind femora and tibiæ black, their tarsi dark reddish (the hind coxæ and trochanters are yellow); abdomen rufopiceous, with yellow bands, usually mostly concealed, at bases of segments; venter yellow.

9. A little larger; no yellow markings on head; tubercles yellow; legs black; yellow bands at bases of abdominal segments 2 to 4, very broad at sides, but interrupted in middle; apical seg-

ment more or less reddish.

Hab. Mt. Lofty, S. Australia, December 31st, 1912 (R. E. Turner). British Museum. Two of each sex; the type is a male. This may be compared with E. ridens, Ckll., but is at once distinguished by the dull mesothorax and the shape of the head. Mr. Meade-Waldo notes: "In Euryglossa calliopsella-rubiginosa-maculata group, but distinct."

## Euryglossa hemichlora, sp. n.

3. Length 4 mm.; head and thorax dark olive-green, the head dull, the thorax shining; mandibles, labrum, the low and broad clypeus (but no supraclypeal or lateral marks), scape in front, and tubercles, all yellow; hair of head and thorax white, thin and rather long; flagellum very long, light ferruginous beneath; tegulæ pallid, reddish; wings hyaline, iridescent, nervures and the large stigma light reddish-brown; second s.m. broader than high, receiving first r.n. a short distance from base; legs yellow, the femora and tibiæ dark brown behind, hind femora dark except apex and a stripe above, hind tibiæ and middle and hind tarsi reddish-brown; abdomen reddish-brown, paler at apex, and with pale bands at ends of first three segments; venter yellow. The hind trochanters are yellow, and their coxæ yellow at apex.

?. A little larger; no yellow markings on head; clypeus and supraclypeal area piceous, with scattered punctures; labrum and mandibles (except at base) reddish; tubercles yellowish-white; abdomen darker, very broad, without evident pallid bands; venter dark; legs piceous, anterior knees and tibiæ in front yellow, middle

tibiæ with a yellow stripe.

Hab. Yallingup, S.-W. Australia, September 14th-October 31st, 1913 (R. E. Turner). One male (=type), four females. British Museum. Allied to E. altitudinis, but easily known by the green colour.

#### Euryglossa melanosoma, sp. n.

 $\mathfrak{P}$ . Length about  $4\frac{1}{2}$  mm.; black, shining, with thin white hair; head broad; flagellum short and thick, variably fulvous beneath, especially pallid apically; front, mesothorax and scutellum shining; tegulæ piceous; wings hyaline, nervures and stigma dilute sepia;

recurrent nervures meeting transverso-cubitals; apical plate of abdomen narrow, ferruginous.

Hab. Yallingup, S.-W. Australia, September 14th-October 31st, 1913 (R. E. Turner). Two females. British Museum. Resembles E. inconspicua, Ckll., but readily distinguished by the black legs and shining metathorax. Readily known from E. nigra, Sm., by the normal antennæ and the shining, polished abdomen.

Euryglossa latissima, sp. n.

Q. Length about 4½ mm.; very broad and robust, with thin white hair; head and thorax olive-green, shining, the front dull; head very broad; mandibles cream-colour, with bidentate dark rufous apex; labrum dark; clypeus sparsely punctured; flagellum ferruginous beneath; mesothorax microscopically lineolate; tubercles densely fringed with white hair; legs black or slightly chalybeous basally, but knees, tibiæ and tarsi ferruginous, the middle and hind tibiæ largely dusky; tegulæ pale testaceous; wings hyaline, stigma dark rufous, nervures pallid; second s.m. very large, quadrate, receiving first r.n. near base; second r.n. meeting second t.c.; abdomen shining, very broad, honey-colour, the first segment mainly piceous, the following three with narrow subapical dusky bands and suffused dusky lateral spots.

Hab. Eaglehawk Neck, S.-E. Tasmania, February 12th-March 3rd, 1913 (R. E. Turner). British Museum. To be compared with E. rubiginosa, D. T., but without the dense fulvous hair of that species.

#### GARDEN NOTES.

## By CLAUDE MORLEY, F.Z.S.

We constantly find in the English periodicals a multiplicity of records from moors, fens, marshes, mountains, and all kinds of wild corners where insects most do congregate, because they are undisturbed by our civilization; but how seldom are published notes from those spots actually inhabited by entomologists and consequently those where most leisure can be enjoyed to note details of history and habits! In treating of a particular spot, such as one's own garden, it is well to set forth the geological formation underlying it, since upon this depends the soil of the district and consequently a large percentage of the vegetation upon which the great majority of its insects subsist. The garden of Monk Soham House is about four acres in extent (including the paddock), and lies almost in the centre of High Suffolk, a somewhat vague district, which may be said to be a ridge of somewhat elevated tableland obliquely crossing the county from north-east to south-west. The surface soil is composed of the Great Chalky Boulder Clay, which at certain points